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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,839	05/10/2001	Masataka Kondo	10873.713US01	5451

23552 7590 04/29/2003

MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

NGUYEN, VINCENT Q

ART UNIT	PAPER NUMBER
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2858

DATE MAILED: 04/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/852,839

Applicant(s)

KONDO ET AL.

Examiner

Vincent Q Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Election filed Feb. 18, 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 12, 13, 16 and 17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 11, 14, 15, 18 and 19 is/are rejected.
- 7) ☒ Claim(s) 2 and 4-10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other:

DETAILED ACTION

Claims renumbered

1. Claims 13-20 have been renumbered 12-19, as the Examiner stated in paper No.
4. Thus, the election including claims 15, 16, 19, and 20 (Election paper No. 5) will be referred as claims 14, 15, 18, and 19 respectively.

Election/Restrictions

2. Applicant's election of Group I (Claims 1-11, 14, 15, 18, and 19) in Paper No. 5 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The Election/Restriction requirement is thus made FINAL.
3. Claims 12, 13, 16, 17, are withdrawn from further consideration.

Priority

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: disturb pause (P1) (Page 4 lines 2). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The drawings are objected to because:

Figure 1, boxes 1-B1 must be labeled "Constant Voltage Generation Circuit"; 1-B2, "Voltage Supplying Circuit"; 1-B3, "Measuring Voltage Generation Circuit"; 1-B4, "Output Part".

Figure 14, box 15-A1 must be labeled "Self Oscillating Circuit"; 15-A2, "Timing Generation Logic Circuit"; 15-A3, "Charge Pump Circuit".

The same objections are applied to figures 17-18. Thus, box 17-A must be labeled "Recording Medium"; 17-B, "Signal Processing Part"; 17-C, "Random Access Memory"; 17-D, "Data Output"; 18-A "Communication Medium"; 18-B, "Modulation/Demodulation Circuit"; 18-C, "Signal Processing Circuit"; 18-D, "Dynamic Random Access Memory"; 18-E, "Input/Output Circuit".

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of functional blocks respectively having different functions, and the negative voltage generation circuit comprises a plurality of negative voltage generation circuits for generating different predetermined negative voltages to be supplied to each of the plurality of functional blocks (Claim 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

6. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Objections

7. Claim 11 recites a plurality of functional blocks and the negative voltage generation circuit comprises a plurality of negative voltage generation circuits for generating different predetermined negative voltages to be supplied to each of the plurality of functional blocks. However, these features are not shown. For the purpose of examination, the Examiner assumes that, a plurality of negative voltage generation circuits for generating different predetermined negative voltages to be supplied to each of the plurality of functional blocks, is the case similar to *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1, 3, 11, 14, 15, 18, 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Furutani (5,673,232) in view of Banba (6,031,397).

Regarding claims 1, 15, 19, Furutani discloses a device comprising (Figure 3) a functional block (223, 224) and a negative voltage generation circuit (225) for generating a predetermined negative voltage (V_{bb}) to be supplied to the functional

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block (223, 224), the negative voltage generation circuit (225) having a charge pump part, which converts a power source voltage into the predetermined negative voltage (V_{bb}) and outputs it, and a voltage detection part (224), which controls the output voltage of the charge pump part. Furutani does not explicitly disclose a voltage detection part controls the output voltage of the charge pump by comparing the output voltage of the charge pump part with a reference voltage. Banba discloses a negative voltage detection circuit (Figure 3) controls the output of the charge pump and outputting the result of comparison to the charge pump part. The only difference between Banba and the invention claim is that the claim recites the ground voltage is used as the reference voltage whereas Banba discloses multiple reference voltages. It would have been obvious to one of ordinary skilled in the art at the time the invention was made to recognize the desirability of modifying Furutani to incorporate a voltage detection part controls the output voltage of the charge pump by comparing the output voltage of the charge pump part with a reference voltage as taught by Banba and a ground reference voltage into the system of Furutani because the division by n , as taught by Banba, must comprise the ground level, and because it would have been desirable to improve the reliability of the system to offset the fluctuation of the detected level since comparing the detected voltage of the charge pump with a reference voltage would avoid the system to be affected by the power source (See Banba's column 2, lines 43-47).

Regarding claim 3, except for the ground voltage discussed above, Furutani disclose the voltage detection part comprises transistors (56, 57) and among the

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transistors (56, 57) included in the voltage detection part. It would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize the desirability of modifying Furutani for the same reason as set forth in claim 1.

Regarding claim 11, pertinence to the discussion of the objection (Para graph 7), Furutani does not disclose a plurality of functional blocks respectively having different functions, and the negative voltage generation circuit comprises a plurality of negative voltage generation circuits for generating different predetermined negative voltages to be supplied to each of the plurality of functional blocks and a constant voltage generation circuit common to each of the plurality of negative voltage generation circuit.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate plurality of functional blocks respectively having different functions, and the negative voltage generation circuit comprises a plurality of negative voltage generation circuits for generating different predetermined negative voltages to be supplied to each of the plurality of functional blocks into the system of Furutani, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U.S. 164 (1893).

Regarding claims 14, 18, pertinence to the discussion of claim 1, Furutani and Banba disclose every subject matter recited in the claim except for the recording device comprises a recording system using at least one selected from light and magnetism. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to recognize that the limitations is true not only for the

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prior art of Furutani but also true for every prior art of recording device (See MPEP 2144.03).

Allowable Subject Matter

10. Claims 2, 4-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patent No. 5,553,295 discloses a method and apparatus for regulating the output of the negative voltage of the charge pump, which uses a comparator for comparing the output of the charge pump with a reference voltage.

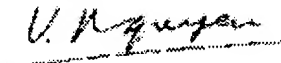
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (703) 308-6186. The examiner can normally be reached on Mon-Fri 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (703) 308-0750. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-5841 for regular communications and (703) 308-5841 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Vincent Q. Nguyen



April 26, 2003



N. Le
Supervisory Patent Examiner
Technology Center 2800